

**REMARKS**

The Examiner issued a single rejection of Claims 1-10 and 12-15 under 35 U.S.C. 103(a), as allegedly being obvious over Andres et al. (US 7,186,398). Applicants respectfully disagree.

The Examiner alleges that Andres et al. teach a nanoparticle comprising Fe/Au, having a diameter of 5 nm to 20 nm, and further comprising a plurality of organic molecules linked to the surface, which may be selected from proteins, peptides, carbohydrates, etc. Applicants respectfully submit that Andres et al. does not provide an enabling teaching for at least 150 carbohydrate molecules on nanoparticles. A prior art reference can only be said to provide an enabling disclosure "if the public was in possession of the claimed invention before the date of invention." MPEP 2121.01. Andres et al. does not put the public in possession of the claimed invention. Andres et al. teaches functionalized nanoparticles "for various biological or medical applications; nonlimiting examples include nucleic acids and oligonucleotides, proteins and peptides, carbohydrates, and lipids." Andres et al. does not provide any process for producing, or examples of, carbohydrate-functionalized nanoparticles. MPEP 2121.02 states that "the mere naming of a compound in a reference, without more, cannot constitute a description of the compound. (*In re Hoeksema*, 399 F.2d 269, 158 USPQ 596 (CCPA 1968))." Andres et al. does not provide an enabling teaching for at least 150 carbohydrate molecules on nanoparticles, as it only makes mention of carbohydrate molecules on nanoparticles, but goes no further in enabling those in the art to practice the invention.

Nonetheless, in order to expedite the prosecution of the present application, without acquiescing to the Examiner's rejection, while reserving the right to prosecute the original claims in the future, Applicants have amended the claims. Claims 1 and 10 have been amended to include the language, "a core gold nanoparticle wherein said core gold nanoparticle consists essentially of gold." The phrase "consists essentially of" limits the scope of a claim to the specified materials "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention (*In re Herz*, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976)). Andres et al. teaches a nanoparticle comprising Au **and Fe**, and hence, does not teach a nanoparticle consisting essentially of gold. Therefore, Andres et al. does not teach a second element of the amended claims.

Besides not teaching core gold nanoparticles consisting essentially of gold, Andres et al. use of gold and iron nanoparticles underscores the lack of teaching of 150 or more carbohydrate

molecules on the nanoparticles. In particular, it is noted that the Examiner has been unable to cite a reference as teaching 150 or more carbohydrate molecules on a core nanoparticles which is all gold. An all-gold core would have more attachment sites for carbohydrates than the gold/iron core of Andres et al. As such, it is not proper to simply assume that the gold/iron nanoparticles of Andres et al., with less attachment sites for carbohydrates, could provide a teaching not even present for all-gold nanoparticles in the art. As such, this amendment highlights the lack of enablement of Andres et al. to teach at least 150 carbohydrate molecules on nanoparticles.

In light of the amendments, and the above arguments, Applicants submit that the Examiner's rejection should be withdrawn.

### **CONCLUSION**

Should the Examiner believe that a telephone interview would aid in the prosecution of this application, Applicants encourage the Examiner to call the undersigned at 608-218-6900.

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